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Prospects of involving local communities in Joint Forest Management in Oyo State, Nigeria

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ABSTRACT

The study assessed the prospects of community participation in Joint Forest Management (JFM) in Oyo State. This is against the backdrop of the State's forestry department perfecting strategies and logistics for community participation in forestry activities in the State. Primary data were sourced through open-ended and structured questionnaires, while secondary data were obtained from the state's forestry publications, records and reports. Additional information was sourced through Focus Group Discussion (FGD). A multi-stage random sampling technique was used for questionnaire administration. A forest reserve was first selected from each of the four (4) forestry administrative zones in the State. In each of these reserves, two communities were randomly selected to elicit information from members of local communities living within and around the reserve. A total of eight communities were involved in the study. One-hundred and sixty (160) questionnaires were administered on the inhabitants. Data generated were analyzed using descriptive tools and appropriate inferential test statistics. The study identified *Taungya* farming as a means of enlisting communal supports in the management of reserve and a way of regenerating forest stand. However, this practice is viewed by local communities as grossly inadequate. Besides, lack of fund, and non availability of planting stocks on most occasion are major constraints against the system. Further, Chi-square test statistics reveal a significant ($Pr < 0.05$) level of dependence of willingness of respondents to participate in JFM on their socio-economic background. Also, a significant level of dependence was established between willingness to participate in JFM and respondent's consent to communal involvement in forest management ($\chi^2 = 70.49$, df = 2, Pr = 0.01) as well as index of involvement of respondent in forest management ($\chi^2 = 70.49$, df = 2, Pr = 0.01). The regression model further indicates a relatively high positive relationship (df =152, R=0.517, $R^2 = 0.268$) between demographic/socio-economic features of respondents and willingness to participate in Joint Forest Management with the State. Thus, although socio-economic characteristics of respondents impacts participation, implementation of JFM in Oyo State is imperative and will need to build on present management structure to succeed.

Key Words: Joint Forest Management, Willingness to Participate, *Taungya*, Communal Involvement

INTRODUCTION

There is an increasing global support on the need for the integration of conservation and development, and also the need for human society to make a commitment to sustainable living. An ingredient for achieving this, as stressed in the "Caring for the Earth: A strategy for sustainable living" (IUCN et al, 1991) is the importance of involving local communities in the design, management and operation of protected areas. Similarly, a portion of chapter 26 of Agenda 21, the policy document of the 1992 Earth's Summit states inter alia: "Indigenous people and their communities have historical relationships with their land... and have developed over many generations, a holistic traditional scientific knowledge of their lands, natural resources and environment. National and International effort at implementing environmentally sound and sustainable development should therefore, recognize, accommodate, promote and strengthen the role of indigenous people and their communities". To this extent, participation of local people is an invariable prerequisite for sustainable forest management.

Literature is well replete with varying experiences and success of local people participation in forest resources management. Nhira and Fortman (1983) reported how community participation system brought considerable success in West Bengal, India where local villagers in return for a share of profit protected Sal forest from Poachers. Headley (2003)

described a pilot programme in Jamaica in which local forest management committees were organized to involve communities in the utilization and management of forest lands. In the same vein, Lai (2003) enumerated the achievements of community participation in the management of nature reserves in China, to include a more effective means of conserving plant and wildlife resources. With community forest management initiatives, villagers in Ecuador, Solomon Island and Papua New Guinea have been able to produce sustainable timber and other non-timber products from their own well-managed forests (Udofia, 2005).

Ibor and Abi (2005), while x-raying the experience of Cross River State in Community forest management highlighted increased rewards to stakeholders, reduction of conflicts between communities and forest officials and building of confidence/rapport among Stakeholders as some of the benefits of the exercise. Though the system is quite recent in Nigeria, the Cross River State experience is a positive indicator that the system could be successful in the country. More so, Jimoh and Azeez (2002) have reported a high level of willingness on the part of community members living within and around Shasha forest reserve to participate in the management of the reserve.

In Oyo State, forest management is an exclusive business of the state's forestry departments. The preclusion of traditional land owners and local communities has not helped in strengthening the forestry institution, hence illegal logging and unrestricted exploitations of forest resources continue unabated. The state's forestry department is perfecting strategies and logistics for community participation in forestry activities in the state. This, it is believed will go a long way to curb the hydra-headed problem of illegal activities in the reserve.

However, community participation in forest management cannot be said to be immune to socio issues which varies from one region to the other. More so, foresights over astonishment should be the perspective of clear cut policy aimed at improving the management status of forest reserves in this part of the world. This study was therefore, designed to examine the prospects of involving local communities in the management of forest reserves in Oyo state.

OBJECTIVE

The main objective of the study is to determine the willingness of local communities in Oyo State to participate in Joint Forest management with the State's forestry department. The specific objectives include: to infer the current level of community involvement in forest management in the State; to assess the level of respondents dependence on forest reserve; to examine the attitude and perspective of local community members on a number of forest management policies in the State.

HYPOTHESIS

The following hypotheses stated in the null form were tested for the study:

Ho_1: "The current level of local community involvement in forest management in the State is not significant".

Ho_2: "Local communities are not willing to participate in Joint Forest Management with the State".

Ho_3: "Demographic/Socio-economic features of Respondents do not impact on their willingness to participate in Joint Forest Management with the State".

METHODOLOGY

The Study Area:

The study area is Oyo State located on longitude $6^0 45^1$ E and latitude $9^0 30^1$N. It covers a total land area of 27,460Km^2. The state is bounded on the east by Osun State, on the South by Ogun State and on the North by Kwara State. It is partly bounded on the West by Republic of Benin and partly by Ogun State. The 2006 National population Census figures put the population of the State at 5,591,589.

Oyo state exhibits the typical tropical climate of averagely high temperatures, high relative humidity and generally two rainfall maxima regime, during the rainfall period of March to October. The mean temperatures are highest at the end of the harmattern (averaging 28^0c), that is from the middle of January to the onset of the rains in the middle of March. Rainfall figures over the state vary from an average of 1,200mm at the onset of heavy rains to 1800mm at its peak in the southern part, to an average of between 800mm and 1500mm in the north. The Southern part of the state are covered by the rain forest and derived Savanna. The composition is basically the large tall crowned trees mixed with thick undergrowth. Guinea Savanna grasses dotted with deciduous trees cover

the northern parts. Local variations from this general description occur along hill-sides, river valleys and in depressions. Besides, some of the vegetation in the state have lost their original character as a result of bush burning and shifting cultivation.

There are nine forest reserves in Oyo State located at different zones (Table1). These include: Ijaiye forest reserve, Osho forest reserve, Gambari forest reserve, Igangan forest reserve, Lanlate forest reserve, Olokemeji forest reserve, Ooko/iro forest reserve, Olaseinde forest reserve and Opara forest reserve. With a total land area of 27,460Km^2, Oyo State has a total forest reserve area of 3,424.611km^2. The state government under the Ministry of Agriculture, Natural Resources and Rural Development administers the management of the reserves (Oyo State Forestry Department, 2006).

Sources of Data:

The data for the study were collected from both Primary and Secondary sources. The primary data were collected by means of formal survey involving the use of open-ended and structured questionnaires and also through Focus Group Discussion (FGD). The secondary data were obtained from the state's forestry publications, records and reports.

Sampling Technique:

A multi-stage random sampling technique was used for questionnaire administration. A forest reserve was first selected from each of the four (4) forestry administrative zones in the State. In each of these reserves, two communities were randomly selected to elicit information from members of local communities living within and around the reserve. A total of eight communities were involved in the study (Table 2). One-hundred and sixty (160) questionnaires were administered on the inhabitants. Additional information sourced through Focus Group Discussion (FGD) were used to supplement the information on community attitude, perception to a number of forest management policies and willingness to participate in Joint forest management. Each discussion session was between the researcher and sub-groups of inhabitants (5-10 people) within and around the study sites. It further provided opportunity for more reliable data to be generated. Participants were randomly selected.

Data generated were analyzed using descriptive tools (such as frequency table, percentage, mode, pie chart and histogram) and inferential statistics (which include Linear regression, Correlation and Chi-square analysis).

RESULTS

Demographic/Socio-Economic Characteristics of Respondents

From Table 3; one hundred and twelve of the respondents (70.0%) are males while only 48 (30%) are females. The modal age frequency (32.5%) occurs in the age bracket 40 - 49 years and 82.5% of the respondents are married. Thirty five percent of them have family sizes ranging between 2 and 6. The practice of Islam is more prevalent among the respondents with the modal frequency count of 88 (55.0%). With respect to educational background, 29.4% have no formal education while 25.6% received education at primary school level only and another 7.5% of them had Qur'anic education. About 38.0% of respondents are involved in farming activities as their exclusive form of occupation but another 7.5% of them are into farming and hunting activities, while 8.8% combine farming with trading.

Table 1: Forest Reserves in Oyo state

Zone	*Lga*	*Forest reserves*	*Total area (ha)*
Ibadan	Akinyele	Ijaiye	28,491
	Iddo	Osho	3,704
	Oluyole	Gambari	11,432
	Ifeloju	Igangan	39,627
	Ibarapa	Lanlate	7,507
		Olokemeji	75.11
Ogbomosho	Ogbomosho	Ooko/Iro	2,300
Oyo	Iseyin	Olaseinde	686
Saki		Opara	248,640
Total			342,461.11

Source: Oyo State Forestry Department, 2006.

Table 2: Format of questionnaire administration

Zone	Forest Management Unit Sampled	Local Communities Surveyed	No of Questionnaires Administered
Ibadan	Gambari	Aba Pannu	20
		Camp Village	20
Ogbomosho	Ooko/Iro	Ile Titun	20
		Ayegun	20
Oyo	Olaseinde	Akinwimi	20
		Lawongbala	20
Saki	Opera	Ayegun	20
		Okerete	20
Total			**160**

Table 3: Demographic/Socio-Economic Characteristics of Respondents

Characteristics	Frequency	Percentage	Mode
Gender			
Male	112	70.0	Male
Female	48	30.0	
Age			
20-29	3	1.9	
30-39	32	20.0	
40-49	52	32.5	40-49
50-59	36	22.5	
60-69	33	20.6	
>70	4	2.5	
Marital Status			
Married	132	82.5	Married
Single	20	12.5	
Divorcee	4	2.5	
Widow	4	2.5	
Family Size			
2-6	56	35.0	2-6
7-8	41	25.6	
>8	32	20.0	
No Response	31	19.4	
Religion			
Christianity	69	43.1	
Islam	88	55.0	Islam
African Traditional Religion	3	1.9	
Education Background			
Primary	41	25.6	
Secondary	21	17.5	
Tertiary	32	20.0	
Qur'anic	12	7.5	
No Formal Education	47	29.4	No formal education
Formal Education			
Occupation			
Farming	61	38.1	Farming
Farming&Hunting	12	7.5	
Farming&Trading	14	8.8	

Trading	45	28.1	
Civil Service	28	17.5	
Total	160	100.0	

Respondents Dependence on Forest Reserves

The result of field survey reveals that forest reserves continue to play a critical role in the sustenance of livelihood among rural dwellers. From Table 4; 27.5% of respondents derive tangible benefits that include Bushmeat, Firewood, Fuelwood, and Medicinal Plants from the reserve. 2.5% of respondent claimed to derive only Bushmeat and Fruits/Mushroom from the forest reserves. Also, 15.6% of respondents depend on the reserve for a combination of Bushmeat, Firewood/Fuel wood, Medicinal Plants and Fruits/Mushroom. It is noteworthy, however, that most of the benefits derived from the forest reserves are at the expense of exploitation permits obtained from the authority in charge of managing the reserves.

Table 4: Respondents Dependence on Reserves

Variables	*Frequency*	*Percentage*
Bushmeat + Firewood/Fuelwood	28	17.5
Bushmeat + Medicinal plants	12	7.5
Bushmeat + Fruits/Mushroom	4	2.5
Firewood/Fuelwood + Medicinal plants	16	10.0
Firewood/Fuelwood + Fruits/Mushroom	8	5.0
Medicinal plants + Fruits/Mushroom	4	2.5
Bushmeat + Firewood/Fuelwood + Medicinal plants	44	27.5
Bushmeat + Firewood/Fuelwood + Fruits/Mushroom	8	5.0
Bushmeat + Medicinal plants + Fruits/Mushroom	4	2.5
Firewood/Fuelwood + Medicinal plants + Fruits/Mushroom	7	4.4
Bushmeat + Firewood/Fuelwood + Medicinal plants + Fruits/Mushroom	25	15.6
Total	160	100.0

Community Involvement in Managing the Reserves:

Table 5 shows that only 45.0% of respondents were involved in communal efforts geared towards the management of the reserve. The level of involvement is through the institution of *Taungya* farming system only. Forestry officials typically allocate pieces of land to local farmers within the reserve area for *Taungya* farming. This is aimed at encouraging the regeneration of the forest stand, majority of which have been highly depleted.

Constraints against *Taungya* system

Constraints against the *taungya* system were identified to include; lack of fund; inadequate skilled labour and; unavailability of planting stocks. From Figure 1, lack of fund ranked highest (50%) in order of magnitude followed by unavailability of planting stocks (30%), while inadequate skilled labour was ranked lowest (20%).

Willingness to participate in Joint Forest Management (JFM) with the state:

Figure 1 shows that 65.0% of respondents interviewed are willing and ready to participate in Joint Forest Management with the State, while 35.0% have some level of reservations for the system. The general opinion and perception of local communities is of particular importance against the perfection of strategies and logistics for communal forestry activity in the state.

Table 5: Community Involvement in Managing the Reserves

Involve in Taungya *farming?*	*Frequency*	*Percentage*
Yes	72	45.0
No	88	55.0
Total	160	100.0

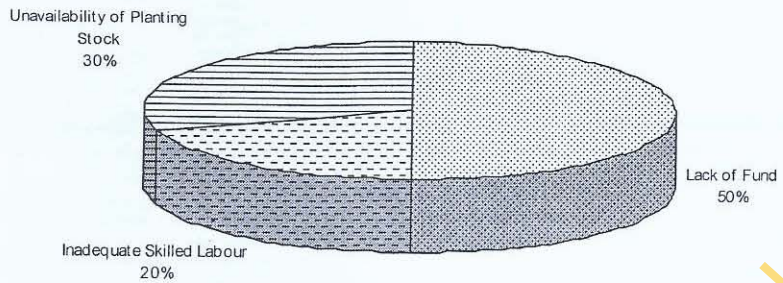

Fig. 1: Constraints Against Taungya System

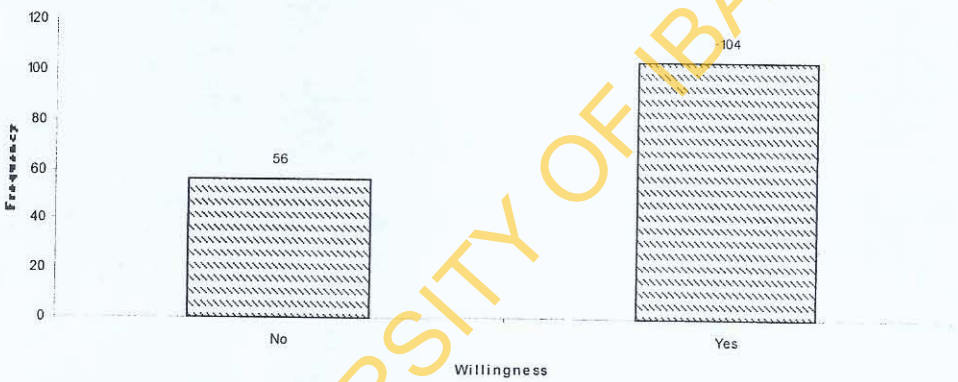

Fig. 2: Willingness to Participate in Joint Forest Management

Required Incentive for Participation in Joint Forest Management:

Funding, technical assistance and strong involvement of local community leaders are considered as incentives required for a fruitful local community participation in Joint Forestry Management (JFM) in the state. Funding ranked highest (Table 6) with a modal frequency of 63 (39.4%). Local Community leaders' support has 20 (12.5%) while technical assistance counts 12 (7.5%). Nevertheless, a host of respondents mentioned two or more of these incentives as being critical to the success of JFM in the state.

Table 6: Required Incentives for Participation in Joint Forest Management with the State

Incentives	*Frequency*	*Percentage*
Fund	63	39.4
Technical Assistance	12	7.5
Local leaders' Support	20	12.5
Fund + Technical Assistance	20	12.5
Fund + Local leaders Support	29	18.1
Technical Assistance + Local leaders' Support	12	7.5
Fund+ Technical Assistance + Local leaders' Support	4	2.5
Total	160	100.0

Opinion of Respondents on Government Forestry Policy

Table 7 reveals the disposition of local community members to a number of government's forestry policy. Respondents generally consider the idea of reserving the forest as satisfactory. The forest is not considered as an obstacle to development. The Protection of the forest which is however, seen in the light of total expropriation of the right of local community to forest resources does not go down well with local community members .This follows the same trend with respect to Forest Management and Development Policy. Opinion of respondents on communal forestry varies. While 14.4% are satisfied with *Taungya* system, the remaining 86.4% consider it as grossly inadequate at addressing the users' right of local community members on forest resources. The same also applies to respondent opinion on exploitation policy. 85.0% of respondents are dissatisfied with government's exploitations policy, while 15.0% consider it adequate.

Table 7: Respondents Opinion on Government's Forest Policy

	Satisfactory		*Not Satisfactory*	
Government Policy on:	Frequency	%	Frequency	%
Reservation	160	100.0	-	-
Protection	1	0.6	159	99.4
Management	0	0	160	100.00
Employment	0	0	160	100.0
Communal Forestry	23	14.4	137	85.6
Exploitation	24	15.0	136	85.0
Total	208	130.0	752	470.0

TEST OF HYPOTHESIS

Ho_1: "The current level of local community involvement in forest management in the State is not significant".

Ho_2: "Local communities are not willing to participate in Joint Forest Management with the State".

The first (Ho_1) and second (Ho_2) hypotheses were based on accessing local involvement in forest management on their willingness to participate in joint forest management (Table 8). It was based on the assumption that initial involvement or perception of benefit therefrom such involvement will impact willingness to participate in joint forest management. The study reveal that although more than half (55.0%) of the respondent are not involved in

taungya practice (an identified index of participation in forest management), 65.0% are willing to participate in JFM. Similarly, although only 45.0% of them consented to local involvement in forest management, more than this figure was willing to participate in JFM (Table 8). Thus, it could be concluded that willingness to participate in JFM is not dependent on present involvement of respondents in forest management. This may be due to their appreciation of their forests consequent upon benefit derive from the forests irrespective of participation in their management

Table 8: Cross-Tab Analyses of the Dependence of Respondents Willingness to Participate in Joint Forest Management on Level of Local Involvement in Forest Management in Oyo State

	Willingness to Participate in JFM			
(A) Indices of Involvement in Community Forestry	Yes	No	NR	*Total*
Not Involved in Taungya Practice	32 (20.0)	52 (32.5)	4 (2.5)	88 (55.0)
Involved in Taungya Practice	72 (45.0)	-	-	72 (45.0)
Subtotal				160 (100.0)
(B) Communal Effort at Forestry Development?				
Yes	72 (45.0)	-	-	72 (45.0)
No	32 (20.0)	52 (32.5)	4 (2.5)	88 (55.0)
Subtotal				160 (100.0)

* Percentages of sum are in parentheses.
NR - No Response

Table 9: Summary of Chi-Square Statistics of the Dependence of Willingness to Participate in Joint Forest Management on Level of Involvement in Forest Management in Oyo State

	Pearson's χ^2 Value	*Degree of Freedom*	*Pr*
Indices of involvement in Community Forestry	*70.49	2	0.001
Consent to Communal Involvement in Forestry Development	*70.49	2	0.001

* Test is significant at 0.05 confidence limit – parameters are dependent on age of respondents.

From Table 9, Chi-square statistics of dependence reveal significant level of dependence of willingness to participate in JFM on respondent's consent to communal involvement in forest management (χ^2 = 70.49, df = 2, Pr = 0.01) and index of involvement of respondent in forest management (χ^2 = 70.49, df = 2, Pr = 0.01). Thus, if willingness to participate in JFM is significant (Table 8) and such willingness is dependent on communal participation in forest management, it could be concluded that level of communal participation in forest management is significant.

H_{O3}: "Demographic/Socio-economic features of Respondents do not impact on their willingness to participate in Joint Forest Management with the State".

Table 10 indicates the results of regression and correlation analysis carried out on the test of significance between demographic/socio-economic features of respondents and their Willingness to participate in Joint Forest Management with the State.

Table 10: Summary of Regression Analysis of Relationship between Demographic/Socio-economic characteristics of Respondents and Willingness to Participate in JFM with the State

Variables	*R*	*R^2*	*Adj R^2*	*D.F*	*F-cal*	*F-tab*	*Decision*
Gender	0.257	0.066	0.060	1	11.153	7.874	Not Significant
Marital Status	0.022	0.011	-0.006	3	0.283	17.618	Significant
Family Size	-0.195	0.038	0.032	2	6.251	20.714	Significant
Religion	-0.254	0.065	0.059	2	10.907	13.905	Significant
Education	-0.137	0.019	0.013	4	3.016	18.375	Significant
Age	-0.400	0.160	0.155	4	30.098	16.219	Not Significant
Occupation	-0.011	0.000	-0.006	4	0.017	25.204	Significant

Table 11: Model Summary of the Relationship Between Willingness to Participate and the Socio-Economic and Demographic Background of Respondents

Model	*R*	*R^2*	*Adjusted R^2*	*Std. Error of the Estimate*	*Change Statistics R Square Change*	*F Change*	*df1*	*df2*	*Sig. F Change*	*Durbin-Watson*
1	.517	.268	.234	.45	.268	7.930	7	152	.000	1.820

a Predictors: (Constant), Occupation, Education Background, Gender, Family Size, Marital Status, Religion, Age
b Dependent Variable: Willingness to participate in JFM With the State; R = Correlation Coefficient; R^2 = Coefficient of Determination; Adj R^2 = Adjusted R^2; D.F = Degree of freedom.

From Table 10; there exists a positive relationship between gender (0.257) and marital status (0.022) of respondents and willingness to participate in Joint Forest Management with the State while a negative correlation occur between family size (-0.195), religion (-0.254), education background (-0.137) age (-0.400) and occupation (-0.011) of respondents and their willingness at embracing Joint Forest Management with the State.

The regression model (Table 11) summary indicates a relatively high positive relationship (df=152, R=0.517, R^2 = 0.268) between demographic/socio-economic features of respondents and willingness to participate in Joint forest Management with the State. The null hypothesis that 'demographic/socio-economic features of Respondents do not impact on their willingness to participate in Joint Forest Management with the State' is therefore, accepted. In other words, the socio-economic feature of respondents is not a constraint to the implementation of Joint Forest Management in Oyo State.

Further, Chi-square test statistics (Table 12) reveal a significant (Pr < 0.05) level of dependence of willingness of respondents to participate in JFM on their socio-economic background. Explaining the dependence was the cross-Tab analyses upon which the chi-square test of dependence was based (Table 13). For example, while more males (70.0%) were interviewed and 65.0% of the respondents were willing to participate in JFM, 55.0% of those willing are males.

Table 12: Summary of Chi-Square Statistics of the Dependence of Willingness to Participate in Joint Forest Management on the demographic characteristics of respondent in Oyo State

	Pearson's χ^2 Value	*Degree of Freedom*	*Pr*
Gender	*33.99	2	.001
Marital Status	*11.79	6	.027
Family Size	*17.91	6	.006
Religion	*11.43	2	.003
Education Background	*25.46	8	.001
Age	*47.48	10	.001
Occupation	*88.57	12	.001

* Test is significant at 0.05 confidence limit – parameters are dependent on age of respondents.

Table 13: Cross-Tab Analyses of the Dependence of Respondents Willingness to Participate in Joint Forest Management on their Socio-Economic Characteristics

Socio-Economic Characteristics	*Indices of Dependence*	*Willingness to Participate in JFM*			
		Yes	No	NR	*Total*
Gender	Male	88 (55.0)	24 (15.0)	-	112 (70.0)
	Female	16 (10.0)	28 (17.5)	4 (2.5)	48 (30.0)
Subtotal				160 (100.0)	
Marital Status	Married	88 (55.0)	40 (25.0)	4 (2.5)	132 (82.5)
	Single	12 (7.5)	8 (5.0)	-	20 (12.5)
	Divorced	-	4 (2.5)	-	4 (2.5)
	NR	4 (2.5)	-	-	4 (2.5)
SUB TOTAL				160 (100.0)	
Family Size	2 – 6	32 (20.0)	20 (12.5)	4 (2.5)	56 (35.0)
	7 – 8	28 (17.5)	13 (8.1)	-	41 (25.6)
	> 8	28 (17.5)	4 (2.5)	-	32 (20.0)
	NR	16 (10.0)	15 (9.4)	-	31 (19.4)
Sub total				160 (100.0)	
Religion	Islam	52 (32.5)	37 (23.1)	-	89 (55.6)
	Christianity	52 (32.5)	15 (9.4)	4 (2.5)	71 (44.4)
Sub total				160 (100.0)	
Education	None	20 (12.5)	8 (5.0)	-	28 (17.5)
	Primary	24 (15.0)	17 (10.6)	-	33 (20.6)
	Secondary	28 (17.5)	19 (11.9)	-	47 (29.4)
	Tertiary	20 (12.5)	8 (5.0)	4 (2.5)	32 (20.0)
	Quranic	12 (7.5)	-	-	12 (7.5)
Sub total				160 (100.0)	
Age	≥ 20 – 29	-	3 (1.9)	-	3 (1.9)
	> 29 – 39	16 (10.0)	16 (10.0)	-	32 (20.0)
	> 39 – 49	16 (10.0)	17 (10.6)	-	33 (20.6)
	> 49 – 59	20 (12.5)	12 (7.5)	4 (2.5)	36 (22.5)
	> 59 – 69	48 (30.0)	4 (2.5)	-	52 (32.5)
	>69	4 (2.5)	-	-	4 (2.5)
Sub total				160 (100.0)	
Occupation	1. Farming	60 (37.5)	-	-	60 (37.5)
	2. Trading	16 (10.0)	25 (15.6)	4 (2.5)	45 (28.1)
	3. Civil Servant	20 (12.5)	8 (5.0)	-	28 (17.5)
	4. Hunting	4 (2.5)	-	-	4 (2.5)
	5. Others	-	11 (6.9)	-	11 (6.9)
	1 & 2	-	4 (2.5)	-	4 (2.5)
	1 & 4	4 (2.5)	4 (2.5)	-	8 (5.0)
Sub total				160 (100.0)	

* Percentages of sum are in parentheses.
NR - No Response

DISCUSSION

This study identified *Taungya* farming as a means of enlisting communal supports in the management of reserve and a way of regenerating forest stand. Almost half of the respondents are involved in this practice. This is in tandem with the reports of Adebisi (1996) and Kio (2002) that *Taungya* farming is the only major way by which community members are involved in forestry in Nigeria. Although very few of community members in the study area are satisfied with the system, the reason advanced for this is the gross inadequacy of the system at addressing their users' right with respect to the community forest resources. Besides, lack of fund, and non availability of planting stocks on most occasion are other major limits of the system. Whereas, respondents generally consider the idea of reserving the forest as satisfactory, the Protection of the forest and government's exploitation policy are seen in the light of total expropriation of the right of local community to forest resources, which does not go down well with them.

Meanwhile, forest reserve resources continue to play a major role in the sustenance of livelihood of local communities deriving tangible benefits that include Bushmeat, Firewood/Fuel wood, Medicinal Plants, Fruits and mushroom. An increasing number of reports have, nonetheless, documented the overharvest of these products and its negative effects on sustainable forest management (Osemeobo, 1990; Cunningham and Milton 1987; Vasquez and Gentry 1989; Pinedo-Vasquez et al. 1992; O'Brien and Kinnaird 1996; Clay 1997). Nevertheless, there is a strong readiness of local community members to participate in Joint Forest Management with the state. As at present there is no institutional arrangement for the practice of Joint Forest Management. Plans are apparently in the offing to commence the practice. Adequate funding, technical assistance and local leaders' supports are critical ingredients identified for the success of the exercise.

Chi-square statistical tests on willingness of respondents to participate in Joint Forest management with the State were significant, and dependent on present involvement of respondent in forest management. Similarly, the regression model indicates a relatively high positive relationship between demographic/socio-economic features of respondents and willingness to participate in Joint Forest Management with the State. Thus, socio-economic characteristics of respondents though impacts participation, implementation of Joint Forest Management in Oyo State will need to build on present management structure.

CONCLUSION

Forest reserves resources have continued to play a critical role in the sustenance of livelihood among rural dwellers in Oyo State. To this extent, sustainable management of the forest is the only means by which the forestry sector can contribute to the achievement of the United Nation's Millennium Development Goals (MDGs) within the State, and the overall programmes of national development in the country. In the light of this, the present forest management strategy that precludes the traditional land owners will remain antithetical to preventing over exploitation and illegal logging of forest resources. Therefore, enlisting the supports of local communities is of paramount importance in the attainment of sustainable forest management in the State. In view of the foregoing, community participation in forest management in Oyo State cannot be more felt than now. For proper and effective coordination of this exercise, the following recommendations are made:

i. The State's forestry department should work with forest communities in assessing, planning and monitoring the management of the reserves in accordance to locally defined concerns, needs and goals, in order to better address rural communities' needs.

ii. Effective benefit sharing mechanism should be formulated. This should also include an enduring two-way communication between forestry department and forest communities. This would go a long way to reduce conflicts and sabotage.

iii. The forestry department should embark on intensive and aggressive campaign to draw international attention to the state thereby arousing their financial support as was the case in Cross River State, Nigeria.

iv. Given the demographic/socio-economic features of respondents (particularly educational background), the local communities should be properly educated on the importance of forests and the need to respect basic forest management principles.

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